

ABSTRACT OF THE DISCLOSURE

An LSP control unit checks whether or not there is a label switching path of a hundred to thousand times of a band necessary for transferring a VoIP packet between a pair of edge label switch routers in response to notification from a VoIP packet control unit. When there is not a label switching path between the edge label switch routers, the LSP control unit establishes a label switching path between the pair of edge label switch routers. When there is a label switching path between the edge label switch routers, the LSP control unit checks whether or not it is possible to ensure a band necessary for transferring the VoIP packet in the label switching path. When it is not possible to ensure a band necessary for transferring the VoIP packet in the label switching path, a label switching path is established between the pair of edge label switch routers. This label switching path has a band of a hundred to a thousand times of a band necessary for transferring the VoIP packet. Each label switch router transfers the VoIP packet via the label switching path.